Local Work Instruction:
Noble Discoverer: Domestic Waste Discharge – D004

Approved By:
Scope:
Issue Date:
Revision level:

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SCOPE:

This document offers work level instructions for the sampling, testing, and reporting associated with domestic waste discharges while operating under the guidelines of the NPDES GP AKG-28-8100, on-board the *Noble Discoverer*. Domestic wastewater (gray water) is defined as materials discharged from showers, sinks, safety showers, eye-wash stations, hand-wash stations, galleys, and laundries. It is also generated in food preparation areas. The volume of these wastes varies widely with time and the assigned ship's occupancy.

RESPONSIBILITY:

The M-I SWACO NPDES Compliance Specialist is responsible to ensure that this LWI has been provided to each person prior to conducting this task. Any personnel that may perform the tasks outlined in this document must be familiar with the process, before the rig begins operating under NPDES regulations.

1.0 References:

1.0 NPDES GP AKG-28-8100:
  1.0.1 Table 5– *Effluent Limitations and Monitoring Requirements for Domestic Waste (D004).*
1.1 Figure 2 – Discharge points (Weston).
1.2 Noble Discoverer Best Management Practices Plan, April 2015.
1.3 Noble Discoverer Quality Assurance Project Plan, April 2015.
1.4 M-I SWACO Standard Operating Procedures: 1006, 3005, 2001, 2012.
1.5 Shell Chemical Inventory and Additives Use Management.
1.6 Shell Exploration & Production Company Alaska Venture 2015 Noble Discoverer Waste Management Plan.

2.0 General Requirements:

2.0 The M-I SWACO NPDES Compliance Specialist is responsible for discharge sampling, testing, and reporting to the Shell Environmental Department while operating under NPDES GP AKG-28-8100.
2.1 The M-I SWACO NPDES Compliance Specialist is responsible for maintaining the list of chemical concentration that will be used in the domestic waste stream. This information will be recorded on the NPDES Master Spreadsheet.
2.2 The Shell Environmental Department is responsible for maintaining the Discharge Monitoring Report (netDMR) and submitting to EPA all discharges sampling, testing and results on a monthly basis. Sample collection will be done in accordance with the Quality Assurance Project Plan.
2.3 Noble is responsible for the annual testing, operating, and repairing of all equipment associated with this discharge.
2.4 In cases of comingled discharge with Sanitary Wastes (Discharge 003), the most stringent discharge limitations for both discharges (Discharge 003 and Discharge 004) will apply to the mixed waste stream.

3.0 Safety Guidelines:

3.0 Before any operations can take place, all personnel involved in this process must complete the following details if required by operator or contractor:

- 3.0.1 The Pre-Tour Meeting is when daily activities are discussed.
- 3.0.2 Job Safety Analysis with all involved parties present.
- 3.0.3 Review Risk Assessment, if applicable.
- 3.0.4 Noble Permit to Work.

3.1 Appropriate personal protective equipment will be worn at all times.

4.0 Discharge/Task Description:

4.0 The domestic waste is generated throughout the ship from sinks, showers, eyewash stations, decontamination showers and laundry facilities and flows to one primary discharge line located in the main engine room.

4.1 Because the effluent does not require processing, it will be discharged to receiving waters and be visually monitored during daylight hours.

4.2 A sample port is installed on the overboard discharge line, located in the main engine room on the starboard side and will be used to collect samples for pH measurements. Each sample will be collected in a 100mL plastic bottle with plastic cap and analyzed immediately using the digital pH meter. All analytical results and visual inspections will be recorded on the NPDES Master Spreadsheet and will be submitted to the Shell Environmental Department on a monthly basis. Samples will be collected in accordance with the Quality Assurance Project Plan.

4.3 Volume of domestic waste discharged is determined from the sounding sheet which is provided daily from Noble. The previous day freshwater volume plus freshwater made minus current daily freshwater volume used volume will equal the amount of domestic waste generated. The toilets and urinals (sanitary waste) use saltwater since the MSD units operate more efficiently with seawater.

4.4 The total volume discharged will be recorded in the NPDES Master Spreadsheet and reported monthly on the netDMR. All visual inspections for floating solids, garbage and foam will be recorded on the NPDES Master Spreadsheet (including time of day), with results submitted to the Shell Environmental Department.

4.5 The M-I SWACO NPDES Compliance Specialist will track all chemicals that have the potential to be introduced to the discharge stream on a monthly basis and reported back to the Shell Environmental Department. The total volume of each chemical used will be divided by the total monthly volume discharge to obtain the concentration. Chemical usage will be an average from the monthly volume discharged.

4.6 The M-I SWACO NPDES Compliance Specialist will immediately report to Shell Environmental Department at 907-830-7435, of any upset condition.

5.0 Effluent Limitations and Monitoring Requirements - Domestic Waste (D004):

Effluent Parameter	Effluent Limitations	Monitoring Requirements
pH	Report s.u.	Monthly Grab
Floating solids, garbage, foam	No discharge	Daily Visual
Total volume discharge	Report	Monthly Estimate

6.0 Clean-Up:

6.0 Follow housekeeping procedures.

7.0 Contingency:

7.0 In the event of an upset condition, effluent may be diverted to the marine sanitation device (MSD) for processing. The vessel has 7 storage tanks (Port / Starboard at 16, 17, 18 & P28) available to use in the event sanitary waste does not meet NPDES GP discharge requirements.

7.0.1 These tanks can store 885 cubic meters (233,790 gal.) of waste. This would allow for ~30 days of operating before tanks would need to be emptied. Tanks would be transferred to another vessel and then would be transferred to an approved utility treatment facility for disposal.

Revision Log:

Date:	Document History:	Revised/reviewed by:	Location: